

remaining part barred alternately with ash and rufous cross-bars; thighs, light tawny rufous with narrow bars of ashy; tarsi clothed to one-third of their length; tail, light-ashy below, bluish-ashy grey above, with indistinct bars, obsolete in centre two feathers; the margins of the inner webs towards the base washed with tawny; bill, black; cere, legs, and feet, greenish-yellow—(dry skin); iris, yellow. Total length 15·5 in.; wing, 10 in.; tail, 8·5 in.; tarsus, 2·6 in. Sex, female. The male is precisely similar in plumage, slightly smaller in measurements. I find in all our specimens that on the centre and outer-tail feathers, the bars have faded out, but on the third and fourth on either side, the bars are tolerably distinct.

Descriptions of Australian MICRO-LEPIDOPTERA.

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I CRAMBITES.

It is somewhat surprising that no progress should yet have been made towards the knowledge of *Micro-Lepidoptera* in a country which so abounds with the groups included under that term as Australia does. In general, the small size and delicate nature of the specimens preclude them from being commonly sent home to England by travelling collectors; but they offer a wide field for the study of resident entomologists. According to the very imperfect data at present possessed, I estimate the total number of species occurring on the Australian continent to be fully 10,000, as they much exceed the larger *Lepidoptera* here in number and variety. It is to be hoped, therefore, that, when once a start has been made, entomologists will begin to take some interest in the subject; and it may not be out of place to state that I shall always be ready to determine to the best of my ability any species that may be entrusted to my care, and that it would be of great interest to receive collections even of the commoner kinds from various parts of the country.

A certain number of descriptions of Australian *Micros* were included by Walker in his British Museum Catalogues; these names I have of course adopted when recognisable, but the

descriptions are commonly very incomplete, the determination of genera utterly unreliable and frequently erroneous, and the original specimens often so scanty and mutilated as to be quite unfit for description; whilst others, even the most conspicuous species, are described under several different names. Besides these, there are only a very few scattered descriptions by Zeller, Newman, &c.

Of the species hereafter described, some of the *Crambidae* have been named both by Zeller and Walker, since Zeller regarded Walker's descriptions as generally unidentifiable; the *Crambi* are, however, generally recognisable, and his names should, therefore, be adopted. Walker has also described certain Australian insects as belonging to various genera in the *Phycidæ*; but I can certify from inspection of the types that hardly any, or perhaps none, are true *Phycidæ*, but *Pyrales*, *Deltoides*, and even small *Noctuae*.

With reference to the localities and dates here appended to the species, it should be observed that, although correct so far as they go, they must not be considered as necessarily at all completely expressing the facts, on account of the very limited data accessible at present.

CHILONIDÆ.

SCHOENOBIVS *Dup.*

Ocelli distinct. Tongue short. Antennæ setaceous, in ♂ longer, ciliated, in ♀ very short. Labial palpi very long, straight, attenuated. Maxillary palpi triangular, appressed to labial palpi. Wings elongate, apex of hind wings reaching beyond anal angle of fore wings; in ♀ fore wings narrower and more acute than in ♂. Anal tuft of ♀ dense, woolly.

Schoen. imparellus n. sp.

♂ $9\frac{1}{2}$ "— $12\frac{1}{2}$ ". Head brownish-ochreous. Labial palpi more than twice as long as head, from brownish-ochreous to dark-fuscous. Antennæ brownish-ochreous or dark-fuscous, strongly ciliated. Thorax brownish-ochreous to blackish-brown. Abdomen pale greyish-ochreous, sometimes suffused with fuscous, whitish at base. Anterior legs dark fuscous; middle and posterior legs

whitish or whitish-ochreous. Fore wings tolerably broad, moderately dilated, hind margin strongly rounded beneath; varying from brownish-ochreous to dark fuscous, darkest along costa; markings very variable or obsolete; generally a small dark fuscous or blackish discal spot at two-thirds; sometimes another obliquely above it near costa, and a third obliquely below it on fold; in the most distinctly-marked specimens there are two transverse cloudy blackish-fuscous lines, the first from two-fifths of costa to two-fifths of inner margin, strongly angulated outwards above middle; the second rising from costa before apex, curving round and running to the median discal spot, thence continued to the inner margin parallel to the first; these lines are generally obsolete or absent; a row of blackish spots on hind margin; cilia greyish-ochreous. Hind wings pure white, towards apex more or less suffused with smoky fuscous; cilia white, smoky towards apex of wing.

♀ 14"—17". Head, palpi, antennæ, thorax, abdomen, and legs white; palpi little longer than head; anal tuft whitish-ochreous; posterior tarsi externally fuscous-grey. Fore wings elongate, tolerably broad, hind margin nearly straight, obliquely rounded beneath; satiny-white, sometimes more or less strongly suffused throughout with whitish-ochreous; cilia white. Hind wings and cilia pure satiny-white.

Extremely variable; the ♂ somewhat resembling *gigantellus* ♂, but darker, the ♀ very distinct.

Very common at Parramatta in February and March on the river, the ♀ resting motionless on rushes, the ♂ more active; both come freely to light. The larva feeds in the cylindrical stem-like leaves of *Juncus prismatocarpus*, growing in the water.

CHILO *Zk.*

Ocelli present. Tongue short. Antennæ setaceous, pubescent, in ♀ hardly shorter than in ♂. Labial palpi very long, straight, porrected, attenuated. Maxillary palpi triangular, appressed. Wings elongate, apex of hind wings reaching beyond anal angle of fore wings. Hind wings with a basal pecten. Abdomen in ♂ somewhat tufted, in ♀ compressed-conical, with apical scales obliquely truncate.

Chil. parramattellus n. sp.

♂ 9"—14". Head white. Palpi whitish-ochreous, mixed with greyish-fuscous. Antennæ ochreous-whitish. Thorax ochreous-whitish, sometimes thinly sprinkled with fuscous. Abdomen white, sometimes tinged with ochreous-grey, anal tuft pale ochreous-grey. Legs whitish, posterior tarsi sometimes with dark grey rings. Fore wings moderately broad, costa nearly straight, apex tolerably acute, hind margin nearly straight, slightly oblique; whitish-ochreous, more or less densely irrorated with fuscous-grey in variable intensity; extreme costal edge whitish, only distinct in dark specimens; a dark fuscous discal dot slightly beyond middle of wing, very much nearer to costa than to inner margin; sometimes on the whitish costal margin are indications of the commencement of transverse lines at one-third and two-thirds, but they are imperceptible on the disc; cilia whitish-ochreous to ochreous-grey. Hind wings white, with a dark grey marginal line, sometimes suffused with greyish posteriorly; cilia whitish-grey, white at base.

♀ 10"—12". Head whitish. Palpi whitish-ochreous, mixed with greyish and dark fuscous scales. Antennæ whitish. Thorax whitish-ochreous, sometimes ochreous-brown on sides. Abdomen white, sometimes partially tinged with ochreous; ovipositor short, triangular. Anterior legs whitish; middle and posterior legs pale greyish-ochreous. Fore wings much narrower than in ♂, apex more sharply acute, hind margin straighter and more oblique; whitish-ochreous, the veins neatly outlined on each side with darker-ochreous; a small black discal dot beyond middle of wing, nearer to costa than to inner margin; a hind-marginal row of clear black dots; cilia whitish, with two grey parting-lines. Hind wings clear white; cilia white.

Apparently allied to the South American species *C. neuricellus* Z. and *obliteratellus* Z.

Common at Parramatta along the river in February and March, especially at light.

CRAMBIDÆ.

PRIONOPHORA *n.g.*

Forehead with overhanging projection of scales. Ocelli distinct, behind antennæ. Tongue moderate. Antennæ moderate, in ♂ ciliated. Labial palpi moderately long, rather shorter than thorax, porrected, attenuated. Maxillary palpi absent. Forewings oblong, apex projecting, acute, hindmargin strongly concave beneath apex, dentate throughout. Hindwings with basal pecten, apex not reaching anal angle of forewings, hindmargin subdentate, with a deeper indentation a little below apex; clothed with long hair-scales towards base. Legs short. Abdomen moderate. Forewings with 12 veins; 8 and 9 stalked, rising out of 7. Hindwings with 8 veins; cell open posteriorly.

Readily distinguished amongst allied genera by the absence of maxillary palpi, the peculiarly produced apex of forewings, and the hair-scales towards base of hindwings.

Prion. ruptella Wkr. *Cat.* 173 (*Crambus*).

11"—14". Head light ochreous, posteriorly whitish, with a few blackish scales, sometimes forming a central blackish line. Palpi whitish-ochreous, sprinkled with blackish scales, beneath white at base. Antennæ pale ochreous. Thorax pale ochreous, sprinkled with blackish scales, and with five longitudinal rather irregular black lines, with a short crest in front and another behind. Abdomen and legs pale ochreous. Forewings moderately broad, slightly dilated; pale ochreous faintly tinged with pale pinkish-brown; a slender blackish subcostal streak suffused with pinkish-brown, from base of costa to beyond middle, leaving a pale costal streak; a straight rather broader fuscous streak, mixed with blackish, from base to costa immediately before apex, strongly but irregularly margined beneath with black; from posterior half of its upper edge this sends three slender dark fuscous lines to costa, separated by whitish spaces; from $\frac{1}{3}$ and $\frac{2}{3}$ of its lower margin it sends two slender dark fuscous streaks to hindmargin; except at junction of these, it is margined beneath with an irregular, rather indistinct, silvery-white streak; the median vein and its branches marked out with strong dark fuscous lines;

from the fourth branch near its base rises an irregular black streak running a little below the main median vein, meeting its extremity on hindmargin, margined beneath by a broad silvery-white streak, interrupted where it crosses the second and third branches; the basal part of the median vein and half the fifth branch is margined beneath by a narrower silvery-white streak ending in some black scales; between the second and fourth branches are several irregular spots of black scales; a blackish line from near base to anal angle; a blackish spot almost on inner margin near base, sending a cloudy blackish streak towards hindmargin; a blackish line along posterior half of inner margin; a row of irregular blackish spots before hindmargin between the veins; cilia whitish, partially tinged with pale pinkish-brown; with a dark fuscous spot at apex, and intersected at the junction of each vein by a blackish line. Hindwings fuscous-grey, darker towards apex and hindmargin; cilia white.

This singular insect (erroneously referred by Walker to *Crambus*) is rather common near Sydney and at Campbelltown, and occurs also in the neighbourhood of Brisbane, in April, September, and December; always beaten from Casuarina, on which the larva doubtless feeds.

CRAMBUS F.

Ocelli distinct. Tongue longer than thorax. Antennæ setaceous, in ♂ generally slightly ciliated or sometimes pectinated, in ♀ simple. Labial palpi long, attenuated, compressed. Maxillary palpi triangular, incumbent. Forewings oblong, acute; hindwings with basal pecten, not reaching beyond anal angle of forewings.

The species of this cosmopolitan grass-feeding genus are tolerably numerous in Australia; those here described, all that I have yet seen, may be thus tabulated:

- | | | | | | |
|----|-------------------------------------|---|---|----|----------------------|
| A. | Apex of forewings strongly produced | ... | ... | 1. | <i>milvellus</i> . |
| B. | „ „ not strongly produced | | | | |
| | α. | Forewings with two discal longitudinal silvery-white streaks. | | | |
| | | I. | Upper streak starting from middle of wing | 5. | <i>aurantiacus</i> . |

- II. Upper streak starting from very near base.
1. Lower streak quite straight 6. *trivittatus*.
 2. ,, ,, deflected upwards at apical extremity 7. *bivittellus*.
- b. With one discal longitudinal silvery-white streak.
- I. Streak simple.
 1. With a broad silvery-white streak along inner margin ... 2. *concinellus*.
 2. Without inner-marginal streak.
 - * Discal streak produced through cilia 4. *torrentellus*.
 - ** ,, ending on hindmargin 3. *lativittalis*.
 - II. Furcate.
 1. Streak shortly bifurcate, not reaching beyond $\frac{3}{4}$ 9. *hoplitellus*.
 2. ,, 3 or 4 branched, nearly reaching hindmargin 12. *relatalis*.
- c. With many irregular broad silvery-white markings 8. *pleniferellus*.
- d. With more or less distinct white streaks on all the veins.
- I. Subcostal streak starting from $\frac{1}{3}$ 13. *opulentellus*.
 - II. ,, ,, almost from base.
 - I. Head white, with an ochreous stripe on crown, hindwings whitish-grey 15. *enneagrammos*.
 2. Head pale ochreous; hindwings white 14. *invalidellus*.
- e. With an indistinct whitish streak or none.
- I. Head white 10. *cuneiferellus*.
 - II. ,, ochreous-grey... .. 11. *dimidiellus*.

Cr. milvellus n. sp.

5 $\frac{1}{2}$ ". Head white, with a broad ochreous-brown longitudinal stripe on crown. Labial palpi twice as long as head, dark fuscous, beneath white at base; maxillary palpi whitish above. Antennæ whitish. Thorax fuscous, indistinctly whitish in front and on lateral margins. Abdomen greyish-fuscous, anal-tuft greyish-ochreous. Legs whitish-ochreous-grey. Forewings short, triangularly dilated, apex strongly produced, hindmargin obliquely concave below apex, rounded beneath; rather dark fuscous, especially towards apex; a rather broad white streak, very irregularly waved on margins, proceeding from base to middle of

disc, there deflexed upwards and running to costa just beyond $\frac{2}{3}$; a white streak, internally very irregularly margined, from $\frac{3}{4}$ of fold to apex of wing, confluent above middle with a white band along hindmargin; inner margin almost entirely suffused with white, and between first and second white streaks ground-colour mixed with white scales; a rather indistinct, outwardly curved, wavy blue-whitish subterminal line, bordered with ground-colour where it cuts the white subapical band; hindmarginal line strong, black, marked on lower half with about five black spots; cilia white, with fuscous-grey parting-line, towards anal angle almost entirely grey-fuscous. Hindwings rather pale fuscous-grey; cilia hardly paler.

1 ♂, near Sydney, in March; very distinct from all known species.

Or. concinnellus, *Wkr. Cat.* 165.

8"—9". Head white, labial palpi twice as long as head, white, on sides fuscous. Antennæ whitish. Thorax white, lateral margins dark fuscous. Abdomen whitish. Legs ochreous-whitish internally, greyish-fuscous externally, tarsi with whitish rings at apex of joints. Forewings elongate, slightly dilated; apex produced, acute, appearing from the cilia slightly falcate, hindmargin beneath apical indentation hardly oblique, rounded beneath; dark fuscous or blackish, blackest along costa; a straight broad silvery-white streak from base to apex, upper margin of basal half almost touching costa, apical half gradually more attenuated; a rather narrower silvery-white streak along inner margin from base to anal angle; a slender bluish-white subterminal line, cutting the longitudinal streaks, proceeding from beyond $\frac{3}{4}$ of costa obliquely outwards, sharply angulated on first streak, thence tolerably parallel to hind margin, angulated again on second streak, ending before anal angle; on costa before subterminal line are two more oblique slender white streaks, and between it and apex another less distinct, not oblique; behind subterminal line the space between the two longitudinal streaks is cinereous-grey, sprinkled with white scales, and cut by three longitudinal black lines; the disc immediately before subterminal line is also more or less sprinkled with cinereous-grey

and whitish scales; hindmarginal line blackish: cilia pale grey, whitish at extremities of longitudinal streaks, and with a small whitish spot about middle, and a grey fuscous indistinct parting line; above apex and below anal angle fuscous. Hindwings whitish, subtransparent, suffused with pale fuscous grey at apex and on upper margin; cilia white.

Belongs to the section of which the European *pascuellus* L. is typical, but differs from all other species by the broad silvery-white inner-marginal streak. Occurs near Sydney, also about Brisbane and Rockhampton. It would appear to have an extraordinary range for an insect of this class, being stated by Walker to occur also in Ceylon and South Africa.

Cr lativittalis, *Wkr. Cat.* 171; *halterellus* *Z. Cr.* 33.

11"—14". Head ochreous-brown, with a very slender (sometimes obsolete) short white line above each eye. Labial palpi short, hardly longer than head, ochreous-brown or dark brown, whitish beneath; maxillary palpi ochreous-brown. Antennæ dark fuscous. Thorax ochreous-brown or dark brown, anterior margin narrowly and a lateral marginal stripe silvery white. Abdomen whitish, slightly tinged with ochreous. Anterior and middle legs dark fuscous, posterior legs whitish. Forewings moderately broad, dilated, hindmargin nearly straight, lightly rounded beneath; varying from brownish-ochreous to deep brown; a narrow silvery-white costal streak from base to a little before apex, posteriorly slightly dilated; a very broad straight silvery-white, strongly black-margined central streak from base to hindmargin, its upper apical angle produced upwards into a tooth along hindmargin to apex, the lower part of its hindmarginal edge also black-margined: cilia ochreous-brown, darker greyish-fuscous at anal angle, with indistinct darker parting-line. Hindwings pale greyish-fuscous, whitish towards base, in ♂ with a slender pencil of brown hairs in a depression at base; cilia whitish, tinged towards base with ochreous-grey.

Easily known by the up-turned apex of the single median streak, and remarkably short palpi. A common species, occurring round Sydney, and up to the summits of the Blue Mountains; also at Melbourne and King George's Sound; from October to March. Walker's name has one year's priority.

Cr. torrentellus n. sp.

15"—15½". Head ochreous, with a small whitish spot on crown, and a pale line above each eye; collar whitish. Labial palpi more than twice as long as head, ochreous, at apex fuscous, beneath white towards base; maxillary palpi ochreous. Antennæ fuscous, basal joint ochreous. Thorax ochreous-brown, with a broad silvery-white stripe on each shoulder. Abdomen pale ochreous. Anterior and middle legs fuscous, posterior legs ochreous. Forewings elongate, moderately broad, hardly dilated, hindmargin very oblique, rounded; very pale ochreous, towards apex and at base suffused with brownish-ochreous, and very slightly on disc; a very narrow silvery-white costal streak from middle of costa to apex, sometimes produced further towards base, much attenuated at extremities; very broad straight silvery-white median streak from base to hindmargin, continued also quite through cilia, strongly but irregularly margined on both sides with blackish scales, least distinctly on disc, very broadly and strongly towards apex, especially on upper margin; sometimes the upper margin of this streak tends slightly to be produced upwards on hindmargin: cilia, except on the white streak, fuscous-grey, with a rather darker parting line. Hindwings white, in ♀ slightly suffused with greyish towards apex; cilia white.

Differs from preceding by the longer palpi, paler colour, and median streak produced through cilia, as well as the absence of any distinct apical tooth; from allied European species by its large size, and the very great breadth of the median streak. Hitherto only from neighbourhood of Duaranga, Queensland; two specimens in Sydney Museum, sent by Mr. Geo. Barnard.

Cr. aurantiacus n. sp.

10"—10½". Head bright ochreous, with a whitish line above each eye. Labial palpi twice as long as head, deep ochreous tinged with fuscous, beneath white towards base; maxillary palpi whitish above. Antennæ silvery-grey, basal joint whitish. Thorax bright deep ochreous, with two parallel longitudinal silvery-white streaks on back. Abdomen silky-white. Legs white beneath fuscous. Forewings rather short, broad, hindmargin,

tolerably straight, rounded beneath; bright orange-ochreous; a silvery-white, internally fuscous-margined, rather narrow costal streak from near base to $\frac{3}{4}$, much attenuated towards both extremities; a broad silvery-white fuscous-margined streak from middle of wing below costa, posteriorly abruptly angulated upwards and ending in apex, rather suddenly attenuated at both extremities; a broad straight silvery-white fuscous-margined streak from base through middle of wing, posteriorly attenuated, barely or not quite reaching hindmargin; a narrow silvery-white partially fuscous-margined streak along inner margin from base to anal angle; a clear dark fuscous line along inner and hind-margins: cilia silvery-white, with two sharp dark fuscous parting lines. Hindwings pale fuscous, more whitish towards base; cilia pure white.

Differs markedly from the two succeeding species by the basally abbreviated upper streak, shorter wings, &c. Several specimens near Newcastle in January.

Cr. trivittatus Z. *Cr.* 34; *vivittellus* *Wkr. Cat.* 171 (*nec* Don.)

11"—15 $\frac{1}{2}$ ". Head ochreous, with a clear white line above each eye, and sometimes whitish behind. Labial palpi two and a half times as long as head, ochreous-brown or dark brown, beneath clear white; maxillary palpi whitish above. Antennæ dark fuscous. Thorax ochreous, darkest on shoulders, with two broad silvery-white longitudinal stripes on back. Abdomen pale greyish-ochreous, basal segment silvery-white. Anterior legs greyish-fuscous, middle and posterior legs whitish. Forewings rather broad, hind margin very slightly sub-concave beneath apex, almost straight; light brownish-ochreous, generally paler towards inner margin; extreme costal edge white from a little before middle to a little before apex; a silvery-white blackish-margined streak starting from very near base immediately below costa, at first narrow and parallel to costa, before one-third deflected from costa and continuing parallel to median streak, becoming much broader, its extremity abruptly deflected upwards shortly before hind margin, becoming attenuated, and ending in apex; a nearly straight broad silvery-white blackish-margined median streak from base to hind margin, somewhat attenuated towards its ex-

tremity; a silvery-white streak along inner margin from base to anal angle, internally rather indistinct, externally margined by a greyish-fuscous streak along inner margin; hind-marginal line dark fuscous: cilia silvery-white, fuscous at tips, and with a broad cloudy dark fuscous parting-line. Hindwings greyish fuscous, in ♀ more whitish, hind-marginal line fuscous; cilia in ♂ greyish or whitish, with darker grey parting line, in ♀ white.

Differs from *aurantiacus* by the upper discal streak nearly reaching base, from *bivittellus* by the straight extremity of the lower discal streak, from both by the duller ground colour. A common and very generally distributed species, occurring from Sydney to the summits of the Blue Mountains, also about Melbourne, Adelaide, Rockhampton, and in Tasmania, in December and January.

Zeller described this as new, quoting Erichson as authority that *bivittellus* Don. is not this, but the following species; Walker, considering this to be Donovan's insect, re-named the other *recurvellus*.

Cr. bivittellus, Don.; *Z. Cr.* 34; *recurvellus*, *Wkr. Cat.* 171.

15". Head deep orange, posteriorly ochreous, with a silvery-white line above each eye. Labial palpi more than twice as long as head, slender, acute, exteriorly crimson-orange, towards apex fuscous, interiorly pale ochreous, beneath white at base; maxillary palpi ochreous, above deep orange. Antennæ in ♂ deeply dentate, ciliated with little tufts of hairs, dark fuscous, basal joint silvery-white. Thorax saffron-orange, with a rather broad longitudinal silvery-white stripe on each side of back. Abdomen whitish-ochreous, anal tuft darker ochreous. Anterior and middle legs dark greyish-fuscous; posterior legs whitish, tarsi suffused with greyish-fuscous. Forewings broad, dilated, hind margin nearly straight, lightly rounded beneath; deep saffron-orange, towards apex and hind margin tinged with crimson; a slender silvery-white costal streak from beyond middle to beyond three-quarters, other parts of costa slenderly dark fuscous; a silvery-white strongly black-margined longitudinal streak proceeding from costa a little above base, at first rather narrow, dilating gradually, at one-third deflected from costa and continued

parallel to median streak, becoming broadest at two-thirds, abruptly curved upwards immediately before hind margin, becoming more attenuated, and ending in apex; a straight silvery-white strongly black-margined median streak from base, its apex sharply curved upwards shortly before hind margin, and ending in a short point directed towards apex of wing, not reaching hind margin; a moderate fuscous streak along inner margin, bordered internally by a narrow silvery-white black-margined streak from base to anal angle; hind-marginal line blackish: cilia silvery-white, fuscous-grey towards tips, and entirely at anal angle. Hindwings greyish-fuscous, slightly paler towards base; cilia greyish-fuscous.

Common at King George's Sound, but apparently exclusively western. Easily known by its brilliant colouring, and the recurved extremities of *both* discal streaks.

Cr. pleniferellus Wkr. *Cat.* 173.

9"—11". Head white, face, a longitudinal median line, and a spot behind each eye ochreous. Labial palpi twice as long as head, ochreous mixed with fuscous, beneath white towards base; maxillary palpi ochreous, whitish above. Antennæ whitish, tinged with ochreous. Thorax ochreous, darkest anteriorly, whitish posteriorly; anterior margin and five longitudinal lines (central, sub-dorsal, and lateral) slenderly white, often indistinct. Abdomen ochreous-whitish, basal segment white. Legs white. Forewings broad, strongly dilated, hind margin slightly wavy, very slightly sub-concave beneath apex; bright ochreous, darkest towards costa; a rather narrow silvery-white sub-costal streak, very close to costa, from base to beyond middle; a broad silvery-white, very elongate-triangular, median streak from base, its apex reaching to a little beyond middle, its upper edge parallel to costa, lower edge parallel to inner margin, outer edge much more oblique than hind margin and black-margined; from middle of its lower edge proceeds a slender silvery-white tooth along fold, not reaching middle; an indistinct white streak along inner margin near base; a straight rather broad oblique silvery-white streak from three-fourths of costa to before middle of inner margin (parallel to posterior edge of median streak), generally quite

or partially interrupted below middle and on fold, posteriorly emitting two black-margined wedge-shaped teeth, one between the two interruptions and one immediately above them; an outwardly curved pale metallic-grey subterminal line a little before hind margin, starting from a white spot on costa; between subterminal line and the transverse streak is a transverse curved row of six or seven silvery-white, sub-ovate, more or less (sometimes very strongly) elongate spots, the narrow interspaces strongly lined with blackish scales; between subterminal line and hind margin, touching both, are four silvery-white spots, first sub-triangular, subapical; second quadrate, in middle; third and fourth quadrate, adjacent, above anal angle; hind-marginal line dark fuscous, with sub-triangular blackish spots on extremities of veins: cilia silvery-white, tips and a parting-line fuscous-grey. Hindwings whitish-grey, in ♀ slightly darker, hind-marginal line dark fuscous; cilia white, with a faint grey parting-line.

Common in the Sydney district, and around Melbourne, in February and March.

Cr. hoplitellus n. sp.

10"—11". Head ochreous-brown, with a whitish line over each eye. Labial palpi twice as long as head, ochreous-brown, mixed with darker-fuscous, beneath whitish. Antennæ dark fuscous, in ♂ strongly pectinated. Thorax deep ochreous-brown. Abdomen whitish, towards base tinged with greyish-fuscous. Legs dark fuscous, posterior pair more whitish above. Forewings moderately broad, hind margin very slightly sub-concave, almost straight; deep brownish-ochreous, partially suffused with darker brown; a straight narrow silvery-white sub-costal streak, proceeding from costa near base, and ending on costa again shortly before apex, enclosing a narrow fuscous costal streak; a silvery-white, strongly blackish-margined, central streak from base, gradually dilating to beyond middle, where it becomes abruptly bifurcate, both branches short, reaching to three-fourths of disc; upper branch slender, abruptly swollen towards apex beneath; lower branch short-pointed, with a tooth above; about the apex of each branch is an irregularly oval cloud of mixed black and bluish-white scales; from between these two clouds proceeds a silvery-white,

above strongly black-margined, broad streak obliquely upwards to apex, sharp-pointed above, sending from its lower edge a more or less distinct silvery-white line towards anal angle; apex of wing suffused with dark fuscous; three or four triangular black dots on hind margin towards anal angle; an indistinct line of dark fuscous scales along inner margin; cilia silvery-metallic grey, white at base towards apical half of hind margin. Hind-wings whitish-grey, indistinctly darker grey-fuscous at apex and along hind margin; cilia whitish.

A very distinct species; abundant in a very restricted locality near Sydney, in March.

Cr. cuneiferellus Wkr. Cat. 175.

$7\frac{1}{2}''$ — $9\frac{1}{2}''$. Head clear white. Labial palpi twice as long as head, white, towards apex and on sides mixed with greyish-ochreous; maxillary palpi white, beneath mixed with fuscous-grey. Antennæ whitish. Thorax white, towards sides and behind tinged with pale greyish-ochreous. Abdomen pale greyish-ochreous, towards base whitish. Legs white. Forewings short, posteriorly dilated, in ♀ more elongate, hindmargin rounded; pale greyish-ochreous, sometimes more or less sprinkled posteriorly with whitish and fuscous scales; the veins more or less perceptibly indicated by lines of fuscous scales; a snow-white median streak from base to hindmargin, often very indistinct or obsolete, especially towards base, most conspicuous at $\frac{2}{3}$, margins obscure; indications of three transverse slender (sometimes obscurely double) dark ochreous-brown lines; first very faint or absent, beyond $\frac{1}{3}$, only perceptible near inner margin, where it is angulated; second sometimes distinct, rising from middle of costa, proceeding obliquely outwards to $\frac{1}{3}$ of breadth, then sharply angulated and proceeding obliquely inwards to median streak, where it becomes obsolete, but is sometimes again sharply angulated outwards; third generally distinct, a little before hindmargin, strongly waved, outwardly curved, at $\frac{2}{3}$ of breadth from costa sending a very sharp angulation inwards; between third line and hindmargin the ground-colour is replaced by black and white scales arranged in alternate transverse lines, giving a bluish-grey appearance, the veins indicated by whitish lines;

hindmarginal line blackish, unspotted; cilia shining grey, pale towards tips, intersected by a rather broad white longitudinal mark at median streak, another less broad below it, and two others much narrower and more indistinct above it, with faint traces of a parting-line. Hindwings fuscous-grey, paler in ♀; cilia white, with a fuscous-grey parting-line near base.

Var. a. Entirely suffused with greyish-ochreous, leaving no trace of white colour either on head or forewings, or of the transverse lines on forewings; only markings the bluish-grey wedge-shaped markings on hindmargin; cilia of hindwings also suffused with greyish-ochreous.

Always distinguishable by the wedge-shaped hindmarginal markings. The *var. a* is singular in appearance, and at first sight appears distinct, but is probably only a dull-coloured spring form; two specimens (without the ordinary form) were taken by Mr. G. H. Raynor, near Parramatta, in August. The ordinary form is the commonest of the genus in New South Wales, occurring in great abundance everywhere from Sydney to the Blue Mountains, at Newcastle, and probably generally; also near Melbourne, and in the Rockhampton district, from November to April.

Cr. dimidiellus n. sp.

5½" — 8". Head ochreous-grey. Labial palpi more than twice as long as head, dark fuscous sprinkled with grey, beneath white at base; maxillary palpi whitish above, dark fuscous beneath. Antennæ ochreous-grey. Thorax brownish-grey. Abdomen greyish-ochreous, anal-tuft paler. Legs greyish-white above, fuscous beneath. Forewings elongate, not much dilated, hindmargin rounded; light ochreous, tinged with grey, the lower half more or less slightly (especially posteriorly), the upper half entirely suffused with ochreous-brown or dark-brown; lower half more or less partially sprinkled with dark fuscous scales; a white median streak from base to hindmargin, broadest at $\frac{1}{3}$, posteriorly attenuated or partially obsolete, above generally margined with blackish scales, especially posteriorly, where they are sometimes very numerous, and form a cloudy blackish band along the streak; generally there are faint indications of two transverse lines, which

are sometimes entirely obsolete, rarely distinct; first line very faint, double, only appearing as two ochreous-brown spots, mixed with blackish scales, on inner margin before middle, and two obliquely above them on lower margin of median streak beyond middle; second line sometimes tolerably distinct, waved, sharply angulated above median streak and sometimes also with a second indistinct angulation towards inner margin, whitish, edged internally with darker ochreous-brown; hindmarginal line dark fuscous, containing three or four distinct black dots towards middle; cilia fuscous-grey, rather metallic. Hindwings fuscous-grey; cilia whitish-grey or whitish, with a fuscous-grey parting-line near base.

Allied to *cuneiferellus*; differs by the narrower wings, smaller size, darker colouring, hindmarginal dots, &c. Also very common, round Sydney and Parramatta, and in the district of the Lower Hunter River; also received from Rockhampton; from January to March.

Cr. relatalis Wkr. Cat. 172.

12"—13½". Head pale ochreous, mixed with whitish, with a very narrow white line above each eye. Labial palpi more than twice as long as head, pale ochreous, much mixed with fuscous towards apex, beneath clear white at base; maxillary palpi white above, fuscous at base. Antennæ whitish. Thorax ochreous, posteriorly white, and with a broad quadrate ochreous-white spot behind collar. Abdomen silky-white, anal-tuft whitish-ochreous. Anterior and middle legs grey-fuscous, thinly whitish-scaled above; posterior legs whitish. Forewings elongate, moderately broad, hindmargin subconcave below apex, thence strongly rounded; greyish-ochreous or greyish-brown tinged with ochreous, especially towards base, towards inner margin rather abruptly and broadly whitish-ochreous, and sometimes also more narrowly along costa; a straight silvery-white, internally blackish-margined subcostal streak from base to costa shortly before apex, with a tendency to emit two or three faint branches towards costa posteriorly; a straight moderately broad silvery-white black-margined central streak from base, parallel to subcostal streak, beyond middle deflected downwards and continuing parallel to inner

margin, ending abruptly just before hindmargin; from the point of deflection proceeds a second branch similar and nearly parallel to the first, but more slender and sometimes in great part obsolete; from half-way between origin of this branch and base rises a third very slender branch, proceeding nearly to anal angle, but generally obsolete at extremity; the interspaces between these branches are somewhat suffused anteriorly with blackish; immediately above the point of deflection of the median streak, but not touching it, rises a moderately broad, basally attenuated, silvery-white blackish-margined streak proceeding directly towards hindmargin, but ending abruptly before reaching it; above this is sometimes also a faint whitish short linear mark; a white submarginal streak from apex to anal angle, inwardly convex, not touching hindmargin, receiving the apices of all the discal streaks, broadest above, sometimes obsolete or absent on its lower half, internally edged with fuscous shading; immediately before and parallel to this submarginal streak is sometimes a wavy pale bluish line; hindmarginal line dark fuscous, with three or four elongate black dots towards anal angle; cilia white, tips and a strong parting-line (sometimes confluent) dark metallic-grey. Hindwings whitish-grey, apex and hindmargin rather abruptly darker grey, hindmarginal line fuscous; cilia white, with a faint grey parting-line near base.

Allied to the three succeeding species, differing especially by the median streak having only two branches beneath, instead of three or four. Not very common, but very widely distributed, occurring at Sydney, and on the Clarence River; near Melbourne and Adelaide, and in Tasmania; in March.

Cr. opulentellus Z. *Cr.* 46.

11½"–12½". Head greyish-ochreous, with a rather broad whitish line above each eye. Labial palpi more than twice as long as head, fuscous, beneath whitish at base; maxillary palpi whitish, towards base fuscous. Antennæ dark fuscous. Thorax ochreous, darker above, with a slender white longitudinal line on each side of back, forming two conspicuous approximated white spots behind the collar. Abdomen whitish-ochreous, more suffused with

grey towards base. Anterior legs fuscous; middle and posterior legs pale ochreous. Forewings moderately broad, hindmargin oblique, rounded, subconcave beneath apex; ochreous; a very narrow silvery-white costal streak from base to beyond middle; a broader silvery-white subcostal streak from one-third to costa immediately before apex, attenuated at extremities; a strong silvery-white central streak on sub median vein from base to hindmargin, roughly margined with blackish scales on apical half above and on basal half beneath; sending from its lower edge four very slender silvery-whitish branches to hindmargin, the lowest branch more or less blackish-margined, and the tolerably broad ochreous interspaces sometimes mixed with blackish or grey scales; an elongate-triangular silvery-white subapical spot, resting on hindmargin below apex and on posterior quarter or median streak, partially or entirely cut longitudinally by two blackish-ochreous lines; below median streak a straight silvery-white streak from near base to anal angle, and a silvery-white streak from base to inner margin at one-third; a fuscous line along inner and hind margins, hindmarginal line marked with seven or eight often obsolete blackish dots; cilia white, becoming metallic-grey at tips, and entirely about anal angle. Hindwings pale greyish-fuscous, hindmarginal line dark fuscous; cilia white.

This and the two following species are very nearly allied, and it is probable that several other closely related species remain to be found. *Opulentellus* differs from both the others by the subcostal streak not reaching nearer to base than one-third, the dark fuscous anterior legs, and general distinctness of marking. Taken commonly at Parramatta in April; Zeller's specimen was taken in Tasmania.

Cr. invalidellus n. sp.

11". Head pale ochreous, with a very slender whitish line above each eye. Labial palpi more than twice as long as head, acute, pale ochreous; beneath whitish at base; maxillary palpi ochreous. Antennæ ochreous-fuscous, in ♂ deeply dentate. Thorax ochreous. Abdomen whitish-ochreous, anal tuft whitish. Anterior legs ochreous, middle and posterior legs whitish. Forewings rather elongate, apex acute, hindmargin slightly sub-con-

cave beneath apex, rounded beneath; pale ochreous, thinly sprinkled between the veins with coarse dark fuscous scales; a straight rather broad white subcostal streak from base of costa to costa again a little before apex, shading into pale whitish-ochreous on costal margin, from two-thirds of its lower margin sending a faint whitish branch to hindmargin below apex; between the subcostal streak and median vein the ground colour is suffused with fuscous, darkest above, forming a broad streak from base to two-thirds of disc, where it becomes obsolete, appearing again as a dark fuscous spot at apex; a dark fuscous spot on upper margin of median vein at two-thirds; median vein indistinctly whitish, very obsolete towards base, sending four indistinct whitish branches to hindmargin, which are interrupted just before reaching hindmarginal streak; fourth branch very faint; beneath these are very faint indications of whitish lines on the other veins; a clear white streak along hindmargin from apex to anal angle, broadest above; hindmarginal line strong, clear, dark fuscous, towards its lower half with five black elongate spots on extremities of veins: cilia white, tips and a parting-line pale metallic-grey. Hindwings white, hindmarginal line indistinctly fuscous; cilia white.

Distinguished from *opulentellus* by the more suffused markings, and sub costal streak reaching base; from *enneagrammos* by the ochreous head and narrower forewings, from both by the white hindmarginal streak, and clear white hindwings. One ♂ in collection of Mr. Masters, from Tasmania.

Cr. enneagrammos n. sp.

9"—12". Head white, with a longitudinal ochreous stripe on crown. Labial palpi more than twice as long as head, ochreous-fuscous above, white internally and beneath; maxillary palpi white, fuscous at base. Antennæ slender, whitish above, dark fuscous beneath. Thorax brownish-ochreous, whitish on back, with a clear white double spot on collar. Abdomen ochreous-whitish. Legs ochreous-whitish. Forewings broadly dilated in ♂, narrower and more pointed in ♀, hindmargin rounded, sub-concave below apex; varying from ochreous-grey to clear

ochreous, lighter towards inner margin; extreme costal edge narrowly white; a straight rather narrow white sub-costal streak from base to apex, sometimes emitting posteriorly two or three slender white streaks to costa, or partially confluent with the white costal line; a rather strong white, above black-margined posteriorly, central streak on sub-median vein from base to hindmargin, sending from its lower edge four rather broad parallel branches to hindmargin, separated by very narrow ochreous lines (sometimes sprinkled with blackish), lowest branch often strongly blackish-margined; an elongate-triangular white subapical spot, resting on hindmargin below apex and on posterior third of median streak, more or less distinctly cut by two rather obsolete ochreous (sometimes mixed with blackish) longitudinal lines; below median streak a white line from near base to anal angle, and a white line from base to before middle of inner margin; inner margin whitish towards base; hindmarginal line fuscous, marked with seven or eight black dots; cilia white, extreme tips and a parting line greyish-ochreous. Hindwings whitish-grey, marginal line dark fuscous; cilia white.

Differs from its allies by its broader wings, white head, and greater breadth of the white streaks on the branches of the submedian vein. Common round Sydney and Parramatta, especially in rather damp places; also near Melbourne and Mt. Macedon; in December and March.

It is possible that *C. argyroneurus* Z. (described from a single South Australian specimen) may denote a variety of this insect, as it possesses many of its characteristics; but Zeller describes the head as yellowish, the first and second branches of the median vein as not reaching hindmargin, the second and third as becoming confluent beyond the middle, and makes no mention of any white sub-apical spot. Considering the close affinity of the species of this group, it would be premature to adopt the name for this insect.

EROMENE *Hb.*

Ocelli distinct. Tongue moderate, spiral. Antennæ setaceous, crenulate. Labial palpi hardly as long as, or markedly shorter than thorax, straight, porrected, acuminate. Maxillary palpi

shortly triangular. Forewings subtriangular, in ♂ with a transparent spot at base of median cell, hindmargin with black spots united by metallic-gold; hindwings with basal pecten.

Of the four species hereafter described, the first two hardly fall well into the genus, owing to their longer palpi, yet they possess the general characters; the others agree with *Eromene* in all respects. They may be tabulated thus:—

- | | | | |
|---|----|----|------------------------|
| A.—Forewings with broad silvery-white markings... | .. | 2. | <i>bifractella</i> . |
| B.— „ without distinct silvery-white markings | | | |
| 1.—Forewings with a central oblique fascia. | | 1. | <i>longipalpella</i> . |
| 2.— „ with two slender transverse lines. | | | |
| a.—Labial palpi hardly longer than head | | 3. | <i>praematurella</i> . |
| b.— „ „ nearly twice as long as head ... | | 4. | <i>dilatella</i> . |

Er. longipalpella n. sp.

10"—11". Head whitish. Labial palpi twice as long as head, whitish, mixed with dark fuscous scales, dark fuscous on sides; maxillary palpi white. Antennæ whitish-ochreous. Thorax and abdomen ochreous. Legs ochreous-grey, tarsi with ochreous-white rings at apex of joints. Forewings elongate, rather dilated, costa straight, hindmargin subdentate, slightly rounded; ochreous, suffused with white, especially on disc, which is almost entirely white and rather thickly irregularly sprinkled with fine black scales, especially towards posterior part of disc, sometimes coalescing in parts to form irregular blackish spots; towards base the white colour forms a distinct median streak from base, which shortly becomes dilated and suffused into the ground colour; a transverse central fascia of the ochreous ground colour, sprinkled with whitish and blackish scales, gently angulated above and below middle, bisected throughout by a violet-silvery metallic line, indistinct on margins; at two-thirds of disc, nearest to costa, is a crescentic violet-silvery metallic mark, strongly margined with black internally and less strongly externally; behind this are four irregular elongate spots of black scales; a silvery-metallic outwardly-curved subterminal line, indistinctly margined internally with blackish; costa before apex blackish; a small white spot on hindmargin in middle, a faint one below apex, and a clear double one above anal angle; hindmargin with seven black

spots on extremities of veins, lower ones largest and sharpest : cilia silvery-metallic-grey, with a whitish line at base and in middle, and intersected by slender white marks at the veins. Hindwings pale fuscous-grey ; cilia white, with a fuscous-grey parting line near base.

Near Melbourne ; not scarce.

Ex bifractella Wkr. Cat. 174 (*Crambus*).

8"—9½". Head ochreous-brown. Labial palpi long, ochreous-brown or dark brown, brassy-metallic on sides. Antennae in ♂ stout, subdentate, above white with dark fuscous rings, beneath dark fuscous ; in ♀ slender, white with dark fuscous rings. Thorax ochreous-brown, at base silvery-ochreous-grey. Abdomen pale greyish-ochreous, somewhat silvery at base. Legs pale greyish-ochreous, anterior pair and posterior tarsi partially suffused with greyish-fuscous. Forewings subtriangular, rather broad, dilated ; deep clear ochreous, darkest along costa ; a silvery-white black-margined costal streak from base, at first very narrow, much broader posteriorly, deflected from costa about middle, and ending at three-fifths a little below costa ; a broad straight silvery-white black-margined streak from base to three-fifths of disc, its apex abruptly blunt-pointed, perpendicularly beneath apex of costal streak ; an indistinct silvery-white partially black-margined streak of variable width along inner margin from base, its apex in a straight line with those of costal and median streaks : a subtriangular silvery-white black-margined subcostal spot between costal streak and hind-margin, its base obliquely concave, with the upper angle sometimes reaching costa, its apex almost reaching the subterminal line ; an oblong silvery-white black-margined streak between apex of median streak and hind margin, reaching hind margin, bisected longitudinally by a blackish line, and interrupted by the sub-terminal line ; the space between this streak and anal angle is whitish-ochreous or whitish (in ♀ silvery-white), irrorated with blackish scales ; the space between it and subcostal spot is whitish-ochreous, irrorated with blackish scales and bisected longitudinally by a blackish line ; a sinuate bluish-silvery metallic line proceeding from inner margin

immediately beyond the streak from base perpendicularly upwards to disc, suddenly bent round apex of median streak, and continued between median and costal streaks to base; a sinuate (sometimes broken) transverse bluish-silvery metallic mark on disc between the bend of this line and the subcostal spot; a bluish-silvery metallic subterminal line proceeding from a small whitish spot on costa at two-thirds very obliquely outwards, curving round a little below apex, and continued very near hindmargin to anal angle; a small white apical spot; three deep black dots on hind margin, on the junction of the white streak from disc: cilia silvery-grey, metallic, white at base towards apical half, often with a basal row of silvery-grey metallic spots. Hindwings pale grey; cilia in ♂ whitish-grey, with darker parting shade, in ♀ clear white.

Not very common; occurs round Parramatta, near Duaringa, and in South Australia, in February and March. This species might, perhaps, be better placed in Crambus.

Er. praematurella n. sp.

4½"—5". Head ochreous-brown. Labial palpi hardly longer than head, dark fuscous, with a conspicuous oval yellow spot on side towards base. Antennæ ochreous. Thorax ochreous-brown. Abdomen pale ochreous-brown. Legs whitish-ochreous. Forewings short, strongly dilated, hindmargin oblique, slightly retuse below apex; in ♂ yellow-ochreous, almost entirely suffused with white except along costa, partially on disc and beneath apex; in ♀ ochreous-brown, darkest towards apex, densely irrorated along inner margin and on posterior part of disc with whitish and black scales; two transverse slender lines; first blackish, from $\frac{1}{3}$ of costa to $\frac{1}{3}$ of inner margin, acutely angulated outwards above middle; second whitish, margined on each side with blackish, proceeding from $\frac{2}{3}$ of costa at first very obliquely outwards, curved round very strongly above middle, and continued nearly parallel to hindmargin to anal angle; between second line and apex is a short white outwardly oblique streak from costa; on lower $\frac{2}{3}$ of hindmargin a row of about eight quadrate black spots, almost touching each other, largest towards anal angle;

cilia white, with a deep metallic blackish-grey line almost along base, and cut by three very broad metallic violet-grey bands, one immediately subapical, one just above and one just below middle. Hindwings in ♂ whitish, in ♀ dark fuscous-grey; cilia white, with fuscous-grey parting-line near base.

Two specimens (♂, ♀) near Sydney, in December.

Er. dilatella n. sp.

6"—7". Head dark ochreous-fuscous mixed with whitish. Labial palpi nearly twice as long as head, long-haired beneath, blackish-fuscous, with a suffused oval deep yellow spot on side towards base. Antennæ slender, dark fuscous. Thorax blackish-fuscous, densely irrorated with whitish. Abdomen blackish-fuscous, posterior margins of segments and anal-tuft clear white. Anterior and middle legs ochreous-fuscous, posterior legs ochreous-whitish. Forewings short, broad, subtriangular, very strongly dilated posteriorly, hindmargin oblique, tolerably straight; blackish-fuscous, very densely irrorated with white scales, towards inner margin often coalescing in ♂ into irregular white patches; first line slender, sometimes partially double, irregular, blackish, suffusedly bordered with whitish, from two-fifths of costa to two-fifths of inner margin, angulated outwards below costa; second line slender, blackish, partially double, rising from a white spot on costa at three-fourths, proceeding very obliquely outwards, strongly curved round close to hind margin, and continued very near and parallel to hind margin to anal angle; a short rather oblique white streak from costa before apex; on lower two-thirds of hind margin a row of 8 quadrate black spots, very near together, separated by ochreous-yellow elongate marks; cilia white, with a broad bright golden-metallic line along base, and a broad dark metallic grey line along tips. Hind wings in ♂ whitish, with irregular indistinct grey-fuscous shades along hind margin, in ♀ blackish-grey; cilia white, tips and a parting-line near base strongly dark-grey.

Very closely allied to *praematurella*, differing principally by the larger size, longer palpi, and the ochreous-yellow marks between the hind marginal spots. Near Parramatta, locally common, in September.

PHYCIDÆ.

NEPHOPTERYX Z.

Antennæ filiform, in ♂ sinuate above basal joint, with a tuft of scales in the sinuation. Labial palpi compressed, ascending or porrected; terminal joint moderately long. Maxillary palpi short, filiform, appressed, alike in both sexes. Forewings long and rather narrow, costa slightly curved; hindwings moderately broad, slightly indented. Forewings with 11 veins; 4 and 5 separate. Hindwings with 8 veins; 2 rising close before posterior angle of cell; 3, 4, 5 on a stalk from posterior angle of cell.

A rather large genus, of almost universal distribution.

- | | | | | | | |
|----|-------------------|----|----|----|----|---------------------------|
| A. | Hind wings yellow | .. | .. | .. | .. | 2. <i>opimella</i> . |
| B. | „ whitish-grey | .. | .. | .. | .. | 1. <i>stenopterella</i> . |

Neph. stenopterella, n. sp.

7½"—8½". Head, palpi, and thorax blackish, very minutely and densely irrorated with whitish; labial palpi straight, porrected, in ♂ rather longer than head, in ♀ nearly twice as long as head. Antennæ fuscous, in ♂ very finely ciliated, with a large elongate tuft of black scales in sinuation. Abdomen grey, segmental margins and anal tuft whitish-ochreous, second and third segments from base entirely bright ochreous. Legs blackish, very densely irrorated with whitish, tarsi with slender whitish rings at apex of joints, posterior tibiae with a slender oblique black band towards apex. Forewings elongate, very narrow, hardly dilated, costa hardly arched, hindmargin very oblique, rounded; blackish, very densely strewn with whitish scales, so as sometimes almost to conceal the ground colour, more blackish in ♀; first line rather indistinct, double, black, both sections very slender, very irregularly waved, emitting several acute teeth posteriorly; on inner margin, at junction of first line, is a short transverse ochreous-reddish spot, strongly margined internally with black; about middle of inner margin is a second less distinct reddish spot, united to a double black discal spot beyond middle by an oblique slender blackish cloud; second line blackish, double, very oblique, from a little before apex to a little before anal angle, shortly but acutely angulated inwards above middle, and again before inner

margin : cilia dark grey, with many bluish-whitish points. Hindwings sub-hyaline, whitish-grey, narrowly darker at apex, and very narrowly along hindmargin : cilia whitish-grey, with dark grey parting-line near base.

Tolerably common near Sydney, at Bowenfels, and Newcastle, from October to January ; comes freely to light.

Neph. opimella, n. sp.

8". Head, palpi, and thorax blackish-fuscous, finely and thinly irrorated with whitish ; palpi obliquely ascending, reaching considerably above head. Antennæ dark fuscous, in ♂ very finely and shortly ciliated, with an angular tuft of black scales in situation. Abdomen dark fuscous, with clear ochreous-yellow rings on segmental margins. Legs blackish, irrorated with whitish, tarsi with very slender whitish rings at apex of joints, posterior legs ochreous-whitish above. Forewings rather short, dilated, costa slightly arched, hindmargin somewhat oblique, rounded ; blackish, densely strewn with whitish scales, the absence of which produces clear black markings ; first line indistinct, double, slender, oblique, at one-third of wing, bordered posteriorly by a broad oblique transverse band, clearly defined towards base, posteriorly more suffused ; second line stronger, "distinct, double, from a little before apex to a little before anal angle, shortly angulated outwards below costa, and again inwards above inner margin, between the two angulations convex posteriorly ; half way between first and second lines an oval black dot above middle of disc : cilia blackish-grey, extreme tips and a slender parting-line bluish-white. Hindwings deep yellow, costa and hindmargin rather broadly bordered with smoky-fuscous, towards anal angle becoming suffused into ground colour ; cilia smoky-grey, with a blackish parting-line near base.

Several specimens near Parramatta, from June to August.

PEMPELIA *Hb.*

Antennæ filiform, in ♂ sinuate above basal joint, with a tuft of scales in the situation. Forehead with a cone of scales. Labial palpi ascending or recurved, second joint rather long, terminal joint very short. Maxillary palpi of ♂ ending in a long

tuft, concealed between labial palpi, of ♀ short, filiform. Forewings moderately long, posteriorly dilated; hind wings moderately broad, slightly indented below apex. Forewings with 11 veins; 4 and 5 separate. Hindwings with 7 or 8 veins; 2 close before posterior angle of cell; 3, 4, or 3, 4, 5, on a stalk.

Also a considerable genus, occurring throughout the world. Besides the two species described, there are certainly several others; but as all are very similar dull-coloured insects, and variable withal, I forbear describing the rest at present.

- A. Forewings with a broad oblique blackish apical
 streak 1. *strigiferella*.
 B — without apical streak 2. *rufitinctella*.

Pemp. strigiferella n. sp.

10"-12." Head greyish-ochreous, with a few whitish and black scales. Labial palpi obliquely ascending, reaching somewhat above head, greyish-ochreous, mixed with blackish at apex. Antennæ greyish-ochreous, in ♂ thickened, dentate, minutely ciliated, with a large triangular tuft of black scales in situation. Thorax greyish-ochreous, with two or three black scales. Abdomen whitish-ochreous, sometimes infuscated, anal tuft of ♂ ochreous, ovipositor of ♀ rather long. Legs greyish-ochreous. Forewings elongate, strongly dilated, hind margin moderately oblique, rounded; greyish-ochreous, generally faintly irregularly streaked with whitish below costa, often somewhat suffused with greyish fuscous, and thinly sprinkled with blackish scales, especially between veins; indications of commencement of a grey-fuscous double very oblique first line on costa at one-third; a little above inner margin at one-third an oblong-elongate short black mark, sometimes very conspicuous; beyond this, above middle of inner margin, a small dark fuscous cloud, sometimes obsolete, often confluent with a cloudy dark fuscous streak along posterior part of inner margin; a double black spot before two-thirds of disc above middle; second line indistinct, double, grey-fuscous, angulated inwards a little below costa, and again very faintly above inner margin; a conspicuous broad blackish oblique apical streak, reaching from apex nearly to discal spot; a hind-marginal row of black dots; cilia whitish-ochreous-grey, with

two grey parting-lines. Hind wings whitish-fuscous-grey, towards apex and hindmargin suffused with darker fuscous; cilia ochreous-grey-whitish, with dark-grey parting-line near base.

Common on dry grassy banks, and at light; round Sydney and Newcastle in January.

Pemp. rufitinctella n. sp.

13" Head brownish-ochreous. Labial palpi oblique, somewhat ascending, not reaching above head, ochreous-whitish mixed with dark fuscous. Antennæ ochreous-fuscous, in ♀ simple, in ♂ — (?). Thorax brownish-ochreous. Abdomen brownish-ochreous above, paler on sides and posteriorly, slightly mixed with fuscous-grey; ovipositor of ♀ short, retracted. Fore wings elongate, rather broad, dilated, hind margin moderately oblique, rounded; dark greyish-ochreous, suffused on disc and at apex with brownish-ochreous, sprinkled with blackish and dark carmine scales; first line only indicated by a few blackish scales beneath costa, very obliquely arranged; a short longitudinal blackish streak a little above inner margin at one-third, beyond which there is a faint cloudy fuscous streak along or near inner margin to anal angle; a double black spot on disc a little before two-thirds above middle; second line very indistinct, fuscous, double, on costa surrounded by a small blackish cloud, angulated inwards a little below costa; a hind-marginal row of transversely elongate black dots; cilia ochreous-whitish, towards tips pale dull carmine, with two or three slender dark-grey parting-lines, and irregular rows of ochreous-whitish points. Hind wings fuscous-whitish, slightly suffused with darker towards apex; hind-marginal line clear, sharp, dark fuscous; cilia whitish, with a dark grey parting-line near base.

Easily distinguished from *strigiferella* by its larger size, more rufous tint, and absence of apical streak. 2 ♀s at light near Parramatta in March.

ETIELLA Z.

Antennæ filiform, in ♂ sinuate above basal joint, with a tuft of scales in the sinuation. Labial palpi very long, as long as

thorax, horizontally porrected; second joint dilated above with compressed scales, broadest before middle; terminal joint very long, slender, filiform. Maxillary palpi of ♂ ending in a long tuft, concealed between labial palpi; of ♀ short, filiform. Fore wings almost parallel-sided, costa straight, curved just before apex, hind margin moderately oblique; hind wings moderately broad, indented before apex. Fore wings with 11 veins; 4 and 5 separate. Hind wings with 8 veins; 2 rising before posterior angle of cell; 3 and 4 unstalked from posterior angle of cell.

Besides the three Australian species here described, only one other species of this genus is known; which, however, possesses a wide range, extending over great part of Europe and America. All the species have a considerable general resemblance.

- A.—Costal edge wholly white 1. *sincerella*.
 B.— „ „ above white streak fuscous
 a.—Fore wings dark slate-grey; metallic
 border of first line continuous 2. *Behrii*.
 b.— „ pale greyish ochreous-brown;
 border forming three separate circular
 spots 3. *chrysoporella*.

Et. sincerella n. sp.

14" Head yellow-ochreous, forehead brassy-metallic. Labial palpi more than twice as long as head, brassy-ochreous, mixed on sides and at apex with dark fuscous scales; tuft of maxillary palpi of ♂ nearly as long as second joint of labial palpi, yellowish-ochreous. Antennæ of ♂ thickened, minutely ciliated, brownish-ochreous, above barred with white, with a large tuft of hair-scales, blackish above, whitish towards base, in situation. Thorax white, becoming ochreous-grey on sides and in front. Abdomen silvery-white, posterior margin of segments whitish-ochreous. Legs silvery white, tarsi infuscated beneath. Fore wings elongate, tolerably broad, slightly dilated, hind margin oblique, slightly rounded; pale greyish-ochreous, becoming darker clearer ochreous towards costal streak, thinly sprinkled on veins with greyish-fuscous; a tolerably broad pure white costal streak from base to apex, margined at base and apex beneath by short dark fuscous cloudy streaks; an indistinct cloudy greyish-

fuscous streak along inner margin from near base to anal angle ; very faint indications of a transverse oblique yellowish band before one-third, margined internally with a few silvery-metallic scales ; hind-marginal line cloudy dark fuscous ; cilia white, with two cloudy fuscous grey parting-lines. Hind wings whitish, towards apex and on hind margin narrowly suffused with fuscous-grey ; hind-marginal line dark fuscous ; cilia white, with an indistinct grey parting-line near base.

A distinct and conspicuous insect, larger and broader-winged than its congeners, easily known by the wholly white costa and obsolete fascia. One ♂, taken by Mr. Burkitt at light at Gladesville, Sydney, in September.

Et. Behrii Z. Is. 1848, 883.

8"—10". Head in ♂ bright ochreous-orange, face brassy-metallic ; in ♀ shining dark ochreous-grey. Labial palpi much more than twice as long as head, dark brassy-fuscous ; maxillary palpi in ♂ long, bright ochreous-orange ; in ♀ very short, fuscous. Antennæ dark fuscous with ochreous-whitish rings, in ♂ thickened, with a large tuft of black scales and white silky hairs in sinuation. Thorax dark ochreous-grey, in ♂ with a bright orange suffused spot on anterior margin. Abdomen whitish-ochreous, base of segments dark-grey. Legs ochreous above, dark-fuscous beneath. Fore wings elongate, narrow, slightly dilated, costa nearly straight, hind margin oblique, slightly rounded ; dark slaty-grey, densely irrorated with whitish, and sometimes in ♂ with scattered carmine scales ; a straight moderately broad clear white costal streak from base to a little before apex, enclosing a very narrow strip of ground colour along costal edge, and margined beneath by a moderately broad ferruginous streak running from base to apex of wing and changing to black towards base and apex ; a transverse very oblique ferruginous band from one-fourth of costal streak to one-third of inner margin, internally edged by a pale golden metallic line of raised scales, and within that by a broader blackish line ; an indistinct small blackish spot on lower margin of subcostal streak before two-thirds ; a hind-marginal row of rather

irregular blackish spots, often indistinct; cilia grey-whitish, with three distinct darker-grey parting-lines. Hind wings in ♂ pale fuscous-grey, in ♀ rather darker, apex dark fuscous-grey; hind-marginal line suffused with dark fuscous; cilia whitish, with dark-grey parting-line near base.

Very closely allied to the European *zinckenella* Tr., from which it differs by the narrower wings, costal white streak not reaching apex, and rust-coloured, not yellow, transverse band; from *chrysoporella* by the rather smaller size, slaty-grey ground colour, and unbroken transverse golden-metallic line. Very common and generally distributed, occurring from Sydney to the summits of the Blue Mountains, round Newcastle, at Melbourne and Adelaide, from September to January.

Et. chrysoporella n. sp.

10"—10½". Head in ♂ bright yellow-ochreous, with a whitish spot above the eyes. Labial palpi nearly thrice as long as head, dark brassy-fuscous; maxillary palpi — (?). Antennæ fuscous with whitish rings, beneath whitish, in ♂ with a large tuft of white silky hairs, clothed on one side with fuscous scales, in sinuation. Thorax brownish-ochreous, in front blackish, with a clear ochreous-yellow spot on anterior margin. Abdomen whitish-ochreous, base of segments suffused with grey-fuscous. Legs ochreous-whitish above, dark fuscous beneath. Forewings elongate, very narrow, scarcely dilated, costa straight until just before apex, hindmargin oblique, slightly rounded; pale greyish-ochreous-brown, irrorated with dark fuscous scales; a straight white costal streak, starting from a small tuft of ochreous-brown hairs almost at base, to costa a little before apex, enclosing a very narrow dark fuscous streak on costal edge, and margined beneath by a line of dark fuscous scales, becoming a wedge-shaped mark at apex, and beneath this again by a pale ochreous-yellow streak from near base quite to apex; a rather curved oblique transverse pale ochreous-yellow band from one-fourth of costal streak to one-third of inner margin, margined internally by three separate circular raised golden-metallic spots, before each of which is a blackish spot; an irregular suffused white spot towards inner margin be-

fore transverse band; a pale ochreous-yellow streak along fold from transverse band to anal angle, shortly dilated above beyond middle, beneath anteriorly margined with a silvery-white streak; branches of submedian vein posteriorly defined with dark fuscous, separated by indistinct whitish streaks; hindmarginal line dark fuscous; cilia grey-whitish, with three irregular darker parting-lines. Hindwings whitish-grey, hindmarginal line dark fuscous; cilia whitish, with dark grey parting-line near base.

Very similar to *Behrii*, distinguished by the more ochreous ground colour, the golden-metallic edging of transverse band forming three separate spots, and the ochreous-yellow and whitish streaks towards inner margin. Several ♂s from Melbourne and Adelaide.

EUCARPHIA *Hb.*

Antennæ filiform, simple, in ♂ somewhat pubescent. Labial palpi rather or very long, compressed, porrected, terminal joint broad, not pointed. Maxillary palpi minute or absent. Ocelli distinct. Fore wings more or less dilated, elongate; hind wings broad, somewhat indented below apex. Fore wings with 11 veins; 4 and 5 separate. Hind wings with 8 veins; 2 rising before posterior angle of cell, 3 and 4 stalked.

A rather small genus, hitherto only recorded from Europe and S. Asia.

Euc. vulgatella n. sp.

9½"—11½". Head pale greyish-ochreous, mixed with whitish. Palpi twice as long as head, pale greyish-ochreous, densely irrorated with dark-fuscous on sides and at apex. Antennæ pale greyish-ochreous, in ♂ thickened. Thorax and abdomen pale greyish-ochreous, anal tuft of ♂ pale ochreous, ovipositor of ♀ rather long, conical, bristly. Legs pale ochreous, tarsi of anterior and middle legs slightly infuscated. Fore wings elongate, narrow, costa nearly straight, hind margin oblique, slightly rounded; whitish-ochreous or pale greyish-ochreous, sometimes suffused with pale brownish-ochreous, entirely more or less densely irrorated with blackish, especially on veins, and broadly dusted with whitish along costa; a faint tendency to show a darker subcostal streak, only appearing distinctly as a short

blackish very oblique streak from apex ; at one-third a black dot above middle, and a second, much smaller and often obsolete, almost perpendicularly beneath it or slightly nearer base, on fold ; immediately before two-thirds a third larger sub-elongate black dot in middle of disc ; an indistinct, often obsolete, transverse row of five or six black dots from extremity of apical streak to anal angle ; a row of large irregular (often indistinct) black dots on hind-margin ; cilia grey, with whitish points, a whitish basal line and two dark-grey parting-lines. Hind wings pale grey, hind marginal line dark-grey ; cilia pale-grey or whitish, with dark-grey parting-line near base.

Rather variable in intensity of colouring. Very common, from Sydney to Bowenfels, and at Melbourne ; from September to January, in dry grassy places.

Enc. ensiferella, n. sp.

12". Head brownish-ochreous, face dark fuscous. Palpi twice as long as head, densely scaled, externally dark-fuscous, internally ochreous-whitish. Antennæ fuscous. Thorax ochreous, on shoulders brownish. Abdomen greyish-ochreous. Legs dark-fuscous. Fore wings elongate, narrow, costa nearly straight, lightly arched before apex, hind margin oblique, hardly rounded ; light pinkish brown-ochreous ; a rather broad ochreous-white costal streak from base to a little before apex, remainder of costa blackish, the blackish scales also extending basally half-way along both margins of costal streak ; a straight slender ochreous-white median streak from base to hind margin a little below apex, near base confluent with costal streak, beneath margined with blackish scales, much most strongly between middle and two-thirds ; between costal and median streaks an indistinct blackish transverse mark at two-thirds, and behind it a longitudinal streak of blackish scales, ending in a cloudy spot just below apex ; three branches of median vein faintly, and sub-dorsal vein more strongly defined with blackish scales ; a cloudy hind-marginal blackish line ; cilia grey, mixed with blackish-fuscous. Hind wings dark fuscous-grey, darker towards hind margin ; cilia grey mixed with fuscous, with a paler basal line.

Conspicuously different from *vulgatella* by the two longitudinal ochreous-white streaks, and absence of discal dots. 1 ♂ from Melbourne.

LASIOCERA *n. g.*

Forehead with a short hardly projecting cone of scales. Ocelli present. Tongue short, scaled at base. Antennæ simple, in ♂ thickened, densely clothed on basal half with thick scales. Labial palpi moderate, obliquely ascending, terminal joint short. Maxillary palpi short, filiform. Forewings rather short, dilated; hindwings moderate, slightly indented beneath apex. Legs rather short. Abdomen stout.

Characterised by the peculiar thickly-scaled antennæ of ♂. I have not yet been able to examine the venation.

Las. canilinea n. sp.

7"—8". Head, palpi, and thorax black; labial palpi white beneath towards base. Antennæ in ♂ black on basal half and at apex, whitish between, in ♀ entirely blackish. Abdomen black, with ochreous-yellow rings on posterior margin of segments; anal tuft ochreous-yellow. Legs blackish, tarsi with slender whitish rings at apex of joints, posterior tibiæ ochreous-whitish except at apex. Forewings short, moderately broad, dilated, hindmargin somewhat oblique, slightly rounded; blackish, very thinly sprinkled with whitish on disc; first line white, nearly straight, oblique, at about one-third; second line white, from a small triangular white spot on costa at three-quarters to a little before anal angle, middle third broadly curved or obtusely angulated outwards; cilia blackish. Hindwings bright deep yellow, hindmargin broadly and costa narrowly blackish-fuscous; cilia smoky-blackish, with indistinct darker black parting-line near base.

This species has considerable superficial resemblance to *Nephopteryx opimella*; apart from the structural distinctions, it may be generally known by its clear blackish colour, and rather sharp white lines. Several specimens from Goulburn and Parramatta.

CEROPREPES *Z.*

Forehead obtuse. Ocelli present. Antennæ setaceous, in ♂ with a small tubercle above basal joint, strongly pectinated on

one side, apex simple. Maxillary palpi short, filiform. Labial palpi moderate, ascending, cylindrical. Tongue long, scaled at base. Forewings dilated; hindwings moderately broad.

Only one other species of this genus is known, from India; it does not closely resemble the Australian one.

Cer. almella n. sp.

11"—12". Head, palpi, and thorax slaty-whitish, densely irrorated with slaty-fuscous. Antennæ dark fuscous. Abdomen slaty-whitish, densely mixed with fuscous, in ♂ more blackish, with segmental margins pale ochreous; in both sexes on posterior margin of basal segment are two ochreous valve-like projections, ending in ♂ in a long, in ♀ in a short tuft of scales, one on each side of back, beneath which is in ♂ a large, in ♀ a small excavation or orifice in side of abdomen. Anterior legs pale slaty-grey, irrorated with dark fuscous, in ♂ internally black, with pale rings at apex of joints of tarsi; middle and posterior legs slaty-whitish, irrorated with slaty-fuscous, with a strong oblique black band at one-third before apex of tibiæ, and joints of tarsi black at base. Forewings rather strongly dilated, hindmargin scarcely oblique, rounded; slaty-whitish, very densely irrorated with slaty-fuscous; a strong black nearly straight oblique transverse line near base from costa to inner margin; first line double, strong, black, from hardly beyond one-third of costa to before middle of inner margin, slightly angulated outwards a little below costa, lower half of its inner margin marked by a strong ridge of raised scales; second line double, black, faintly waved, from just before apex to just before anal angle, making a rather strong curved projection inwards below costa, and a rather indistinct sharply-acute angulation inwards above inner margin; half-way between first and second lines above middle of disc a transverse elongate-linear raised black mark, behind and beneath which is an indistinct blackish cloud, sometimes produced beneath to lower extremity of first line; hindmarginal line strong, black, broken by very small slaty-whitish spots about veins: cilia grey, intersected by a strong line of slaty-whitish scales before middle, and with tips and two lines of points before tips

slaty-whitish, immediately before each of which they are suffused with blackish. Hindwings pale clear ochreous-yellow, on upper margin towards apex suffused with dark fuscous; hindmarginal line dark fuscous; cilia pale ochreous-yellow, with a dark fuscous parting-line near base, and towards apex becoming suffused with smoky fuscous.

A very conspicuous insect. The singular orifices and valve-like arrangements at base of abdomen I conjecture to be auditory organs, from the analogy of other insects. Several specimens bred from larvæ feeding rather gregariously in silken nests on *Exocarpus cupressiformis*, near Parramatta in April; imago emerged from June to September.

MYELOIS Z.

Forehead smooth. Antennæ filiform, simple, in ♂ finely ciliated. Ocelli distinct. Labial palpi pointed, erectly ascending, terminal joint short. Maxillary palpi short or obsolete. Forewings of variable breadth, costa straight or slightly curved; hindwings rather broad. Forewings with 11 veins; 4 and 5 stalked or separate. Hindwings with 8 veins; 3 and 4 rising stalked from posterior angle of cell.

A large and rather heterogeneous group, occurring throughout the world.

- A. Forewings with a broad curved white subcostal band... 1. *subarcuella*.
 B. ,, ,, no white subcostal band 2. *cosmiella*.

Myel. subarcuella n. sp.

6½"—7". Head dark grey mixed with blackish. Palpi short, arched, blackish mixed with whitish-grey scales. Antennæ whitish, with dark fuscous rings. Thorax dark purple grey. Abdomen fuscous-grey, segmental margins and sides pale ochreous; anal tuft ochreous. Anterior legs purple-fuscous, irrorated with whitish, tarsi and apex of tibiæ blackish, tarsal joints with whitish apical rings; middle and posterior legs above purple-fuscous, irrorated with whitish, beneath ochreous-white, tarsi black with slender whitish rings at apex of joints. Forewings short, somewhat dilated, costa nearly straight, hind margin rather oblique, rounded; dark purple-fuscous, somewhat irrorated

with purple-whitish scales, especially towards hind margin; a broad, somewhat curved, white subcostal streak, sprinkled with purple scales, rising from costa a little above base, and ending on costa again a little before apex, enclosing a short narrow black costal space; apical extremity of subcostal streak margined posteriorly by a short broad oblique blackish band from apex of wing; first line hardly visible, purple fuscous, about $\frac{1}{3}$, angulated in middle; second line very indistinct, straight, double, dark purple-fuscous enclosing a paler central space, from extremity of subcostal streak to anal angle; a row of cloudy blackish spots on hind margin, generally very indistinct; cilia fuscous-grey, with purple-whitish points. Hindwings subhyaline, pale grey, darker at apex; hind marginal line dark fuscous-grey; cilia whitish-grey, darker at apex, with a dark-grey parting-line near base.

Two ♂'s from Blackheath on the Blue Mountains, in March.

Myel. cosmiella n. sp.

9". Head and palpi blackish irrorated with whitish, palpi whitish at base and internally. Antennæ dark fuscous with indistinct whitish rings. Thorax blackish-fuscous. Abdomen dull ochreous, suffused with fuscous at base of segments. Legs blackish, densely irrorated with whitish, tibiæ with a black band before middle, tarsal joints with whitish apical rings. Forewings elongate, rather narrow, slightly dilated, hind margin rounded; blackish, very densely irrorated with whitish, except on each side of first line, where the black colour predominates for some breadth; first line represented by a rather broad white slightly curved transverse band, sprinkled with blackish scales, and with an indistinct central blackish streak in lower half; second line indistinct, double, black, rising from costa before apex, immediately making a strong angulation inwards, thence returning and continued to inner margin before anal angle; between first and second lines an indistinct double black spot above middle of disc: cilia grey, with many bluish-whitish points. Hindwings thinly scaled, whitish-grey, very narrowly darker grey at apex and along hind margin: cilia whitish, with a dark grey parting-line near base.

One ♂ from Melbourne.

ANERASTIA Hb.

Forehead with blunt cone of scales. Tongue short or absent. No ocelli. Antennæ filiform, in ♂ more or less distinctly sinuate above basal joint, pubescent or ciliated, in ♀ simple. Labial palpi long horizontally porrected or obliquely ascending, second joint dilated above, terminal joint long filiform. Maxillary palpi short or obsolete. Forewings elongate, narrow, hindmargin very oblique; hindwings uniformly rounded, faintly indented. Forewings with 10 veins; 4 and 5 coincident. Hindwings with 7 veins; 3 and 4 long-stalked.

A not large, but universally distributed genus, the species of which frequent dry sandy places. Besides the one described, which is very conspicuous, I have seen two other Australian species, much more nearly resembling European forms, but not in fit condition for description.

Aner. mirabilella n. sp.

7"—7½". Head dark fuscous, ochreous at back, with a slender whitish line above each eye. Palpi twice as long as head, densely scaled, horizontally porrected, dark reddish-fuscous, beneath white at base. Antennæ fuscous, thinly whitish-scaled. Thorax ochreous-grey-brown, on sides brownish-crimson. Abdomen whitish-ochreous. Anterior and middle legs externally whitish, internally dark fuscous-grey; posterior legs white. Fore-wings rather elongate, not dilated, apex rounded, hindmargin oblique, rounded beneath; pale carmine, with a rather large oval white spot on middle of inner margin, blackmargined except on lower edge; cilia whitish, with a pale carmine basal line, and blackish at apex and towards anal angle. Hindwings pale fuscous-grey, suffused with pale ochreous towards base and at apex, with a rather large irregularly elongate sharp black patch on middle of inner margin, forming a continuation of the dorsal spot on forewings, when the wings are expanded; cilia pale ochreous.

The continuation of the markings of forewings over hindwings is a very unusual and curious circumstance in this group, and in conjunction with the exceptional character of these markings, causes a singularly exotic facies. Two ♂ s, near Sydney, in January.

HOMOEOSOMA *Curt.*

Forehead with a blunt ridge of scales. Tongue strong. Ocelli distinct. Antennæ filiform, in ♂ with a short notch above basal joint. Labial palpi moderate, obliquely ascending, slender, somewhat compressed; terminal joint rather more than half as long as second, filiform, rather pointed. Maxillary palpi filiform, appressed. Forewings long, moderately dilated, costa faintly curved, more strongly before apex, hindmargin very oblique, almost straight. Hindwings narrow, pointed, flatly rounded, hardly indented. Forewings with 10 veins; 8 absent, 4 and 5 stalked. Hindwings with 7 veins; 3 and 4 unstalked from posterior angle of cell.

A small genus, occurring through Europe and Asia; the larvae feed in the flower-heads of *Compositæ*. The two species described are readily distinguished from each other by their size and different markings.

Hom. vagella Z., *Is.*, 1848, 863.

7½"—8". Head whitish, densely mixed with slaty-fuscous, especially on forehead. Palpi arched, dark slaty-fuscous irrorated with whitish. Antennæ dark fuscous. Thorax dark slaty-fuscous, irrorated with whitish. Abdomen ochreous-whitish, partially suffused with grey. Legs thinly ochreous-whitish-scaled above, dark fuscous beneath. Forewings extremely narrow, hardly at all dilated, hindmargin very oblique, slightly rounded; dark fuscous, towards costa blackish, densely irrorated throughout with slaty-whitish scales, coalescing to form a more or less distinct white irregular subcostal streak from near base to about two-thirds of disc, sometimes faintly streaked with brownish; a blackish circular spot near base in middle; first line tolerably strong, cloudy, blackish, from one-third of costa to a little beyond one-third of inner margin, strongly angulated outwards above middle, indistinctly margined basally with whitish; second line indistinct, blackish, not far from and nearly parallel to hindmargin, broken and shortly acutely angulated inwards below costa; at two-thirds of disc are two blackish obliquely placed dots above middle, lower nearer to base; cilia grey-whitish, with

two indistinct irregular slaty-grey parting-lines. Hindwings whitish-grey, apex darker, hindmarginal line suffused, dark fuscous; cilia whitish, with faint darker-grey parting-line near base.

The narrowest-winged species of the genus. Tolerably common in the Sydney district; also at Melbourne and Adelaide, from September to January.

Hom. distichella n. sp.

4"—6". Head, antennæ, and thorax pale greyish-ochreous; palpi slightly arched, externally dark fuscous, internally and beneath whitish. Abdomen ochreous-whitish. Anterior legs dark fuscous; middle and posterior legs ochreous-whitish. Fore wings rather short, tolerably broad, moderately dilated, hind margin very oblique, rounded; pale whitish-ochreous, strewn with coarse blackish scales; a broad brownish-ochreous streak along fold from base to anal angle, and a shorter, sometimes broader, one above it on disc; a rather large cloudy blackish dot on disc at two-fifths, and a second obliquely below it, much nearer base, on lower edge of fold; a straight row of about five or six similar dots crossing wing in a line from four-fifths of costa to anal angle, second from costa generally largest, elongate, next three close together, confused, sixth almost on anal angle; cilia ochreous-whitish. Hind wings pale grey, hind-marginal line broad, dark fuscous; cilia ochreous-whitish.

Differs from the *nimbella* group by the merging of the second line with the discal spots; allied rather to *sinuella* F., but superficially very different in appearance. Common and generally distributed in New South Wales, from Parramatta to Bowenfels, and on the Lower Hunter R., from January to March.

EPHESTIA, Gn.

Eph. elutella Hb.

This and the three following species are naturalised importations from Europe, and are too well known to need description.

Sydney, Parramatta; common in houses. The larva feeds on biscuits, chocolate, &c.

Eph. interpunctella Hb.

Sydney, Parramatta, common. The larva feeds in corn-bins, apparently especially on maize, in company with *Sitotroga cerealella*, doing considerable damage.

GALLERIDÆ.

GALLERIA F.

Gall. mellonella L.

Specimens of this insect are sent from Queensland, where it is considered destructive; the larva feeds in bee-hives on the wax.

ACHROEA Hb.

Achr. grisella F.

Sydney, Parramatta, Melbourne; common in February and March. The larva feeds in bee-hives on the wax, causing very great destruction if not checked; but I have also seen it very abundant in a fruit-shop in Sydney, which may indicate some versatility of habit.

ON THE GEOLOGY OF YASS PLAINS.

[SECOND PAPER.]

BY CHARLES JENKINS, ESQ., L.S., YASS.

Plate 17.

In endeavouring to describe some of the fossils enumerated in my former paper, I necessarily labour under the disadvantage of having at Yass no opportunities of making such comparisons, or at present the references, I could wish. Without assuming such special knowledge, as only a life exclusively devoted to Palæontology can give, I hope, however, by detailed drawings and descriptions, to place before you the specific nature of the different fossils in such a manner that, if my determination should be wrong, it may be at once apparent to those better qualified to judge than myself.

I propose, in the first place, to deal with those fossils which I either consider the more remarkable, or are well-known and regarded in other countries as characteristic of particular zones,